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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,503	10/24/2003	Yasuaki Kuwata	117604	7211

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EXAMINER

NGUYEN, PHILLIP

ART UNIT	PAPER NUMBER
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2828

DATE MAILED: 07/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/691,503	<b>Applicant(s)</b> KUWATA, YASUAKI	
	<b>Examiner</b> Phillip Nguyen	<b>Art Unit</b> 2828	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 5/2/06.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7, 14 and 16-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 14, 17-18 is/are rejected.
- 7) ☒ Claim(s) 16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments with respect to claims 1-7, 14, and 16-18 have been considered but are moot in view of the new ground(s) of rejection.

### ***Priority***

2. Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

### ***Claim Objections***

3. Claims 7 and 18 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The limitation of claim 7 has been claimed in claim 1. Claim 18 is a duplicate of claim 17.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claim recites "the electrode" which is lack of antecedence basis.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-3, 7, and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Cox et al. (US 7,061,945).

With respect to claims 1 and 7, Cox discloses in Fig. 6 a VCSEL comprising a laminate of semiconductor layers emitting multimode laser light; and a block member blocking light of at least a fundamental mode among the multimode laser light emitted from the laminate (col. 8, lines 36-60).

With respect to claim 2, Cox discloses the laminate semiconductor layers comprising a substrate 12, a lower mirror 16 on the substrate, an upper mirror 24, an active region 20, and a current confinement layer 40, the active region and the current confinement layer being interposed between the upper and lower reflection mirrors; and the block member is provided in an emission aperture provided above the upper reflection mirror. It is noted that the Cox teaches

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the claimed invention in Fig. 6 with the block member on top of the laser in the prior art in Fig. 1.

With respect to claim 3, Cox discloses a top of the laminate being partially covered with an electrode 26 so that an emission aperture can be defined; and the block member is provided on the top of the laminate and located in the center of the emission aperture.

With respect to claim 14, Cox discloses the claimed invention as in claim 1 and further discloses using the claimed laser in the optical communication system in which the fiber is optically connected to the laser (col. 2, lines 12-24).

6. Claims 1-2, 4-6, and 17-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Carey et al. (US 6277696).

With respect to claim 1, Carey discloses in Fig. 3A –3Ba VCSEL comprising a laminate of semiconductor layers emitting multimode laser light; and a block member 326 blocking light of at least a fundamental mode among the multimode laser light emitted from the laminate. It is noted that VCSEL in Fig. 3B is a bottom emitting VCSEL; however electrode 326 also block light escaped from mirror 340, therefore the electrode 326 is considered as the block member which blocks at least a fundamental mode among multimode laser light from the laser.

With respect to claim 2, Carey discloses the laminate semiconductor layers comprising a substrate 316, a lower mirror 302 on the substrate, an upper mirror 304, an active region 306, and a current confinement layer 324, the active region and the current confinement layer being interposed between the upper and lower reflection mirrors; and the block member is provided in an emission aperture provided above the upper reflection mirror.

With respect to claim 4, Carey discloses the laminate has a mesa (top mirror) and an emission aperture is formed on the mesa; and the emission aperture and the block member 326 have shapes related to the outer shape of the mesa (see the Fig. 3B).

With respect to claim 5, Carey discloses in Fig. 3A the laminate comprises a current confinement layer 324 having a conductive region (middle region); and the block member 326 has a size smaller than a size of the conductive region.

With respect to claims 6 and 17-18, since the claim fails to define “the electrode”, it is assumed that the block member 326 can also be the electrode. Carey teaches the claimed invention with the block member 326 being metal electrode.

#### ***Allowable Subject Matter***

7. Claim 16 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Communication Information***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phillip Nguyen whose telephone number is 571-272-1947. The examiner can normally be reached on 9:00 AM - 6:00 PM.

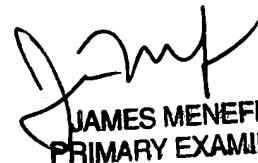
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MINSUN HARVEY, can be reached on 571-272-1835. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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**JAMES MENEFEE**  
**PRIMARY EXAMINER**